BANSHCHIKOV, V.M., STOLYAROV, G.V. (Moskva)

Psychic changes induced by cortisone and ACTH. Zhur.nevr. i psikh. 58 no.10:1269-1274 '58 (MIRA 11:11)

(MENTAL DISORDERS, etiol. & pathogen.
ACTH & cortisone, review (Rus))
(ACTH, inj.eff.
ment. disordr., review (Rus))
(CORTISONE, inj.eff.
same (Rus))

BANSHCHIKOV, V.M.; STOLYAROV, G.V.

Experimental psychoses and psychiatric use of lysergic acid diethylamide; review of foreign literature. Zhur.nevr. i psikh. 59 no.2: 222-232 '59. (MIRA 12:4)

(LYSERGIC ACID DIETHYLAMIDE,
review (Rus))

BANSHCHIKOV, V.M., prof.; STOLYAROV, G.V., dotsent

Present status of the problem of mental disorders in patients with vascular diseases of the brain and tasks in studying it. Trudy Gos. nauchno-issl. inst. psikh. 22:3-18 '60. (MIRA 15:1)

1. Klinika sosudistykh psikhozov (zav. - prof. V.M.Banshchikov) Gosudarstvennogo nauchno-issledovatel'skogo instituta psikhiatrii Ministerstva zdravookhraneniya RSFSR.
(CEREBROVASCULAR DISEASE) (MENTAL ILLNESS)

STOLYAROV, G.V., kand.med.nauk

Arterial pressure in acute psychoses in patients with cerebral atherosclerosis. Trudy Gos. nauchno-issl. inst. psikh. 22:223-232 '60. (MIRA 15:1)

1. Chitinskiy gosudarstvennyy meditsinskiy institut (dir. - dotsent Yu.D.Ryzhkov) i kafedra psikhiatrii (zav. - kand.med.nauk G.V.Stolyarov) i klinika sosudistykh psikhozov (zav. - prof. V.M.Banshchikov) Gosudarstvennogo nauchno-issledovatel'skogo instituta psikhiatrii Ministerstva zdravookhraneniya RSFSR.

(BLOOD PRESSURE) (MENTAL ILLNESS)
(CEREBRAL ARTERIOSCLEROSIS)

STOLYAROV, G.V., kand.med.nauk

Clinical and statistical data on patients with cerebral atherosclerosis with mental disorders. Trudy Gos. nauchno-issl. inst. psikh. 22: 436-446 '60. (MIRA 15:1)

1. Psikhiatricheskaya klinika imeni S.S.Korsakova (zaveduyushchiy klinikoy - deystvitel'nyy chlen AMN SSSR prof. V.A.Popov) i klinika sosudistykh psikhozov (zav. klinikoy - prof. V.M.Banshchikov) Gosudarstvennogo nauchno-issledovatel'skogo instituta psikhiatrii Ministerstva zdravookhraneniya RSFSR.
(CEREBRAL ARTERIOSCLEROSIS) (MENTAL ILLNESS)

BANSHCHIKOV, V.M.; STOLYAROV, O.V.

Significance of drug-induced and experimental psychoses for
the understanding of some general problems in psychiatry.
Zhur.nevr.i psikh. 60 no.1:77-84 '60. (MIRA 13:6)
(PSYCHOSES exper.)

STOLYAROV, G.V., dotsent

Arterial hypertension and psychosis. Trudy Gos.nauch-issl.inst. psikh. 25:459-464 '61. (MIRA 15:12)

1. Kafedra psikhiatrii Chitinskogo gosudarstvennogo meditsinskogo instituta (zav. kafedroy - dotsent G.V.Stolyarov; direktor instituta - dotsent Yu.D.Ryzhkov) i klinika sosudistykh psikhozov (zav. - prof. V.M.Banshchikov) Gosudarstvennogo nauchno-issledovatel'skogo instituta psikhiatrii Ministerstva zdravookhraneniya RSFSR.

(PSYCHOSES) (HYPERTENSION)

BANSHCHIKOV, V.M. (Moskva); STOLYAROV, G.V. (Chita)

Psychoses caused by the antitubercular agents isoniazid and iproniazid and the use of these preparations in the treatment of mental disorders. Zhur. nevr. i psikh. 61 no. 1:127-139 '61.
(MIRA 14:4)

(PSYCHOSES) (ISONICOTINIC ACID) (MENTAL ILLNESS)

BANSHCHIKOV, V.M. (Moskva); STOLIAROV, G.V. (Chita)

Serotonin and its role in mental diseases. Zhur. nevr. i psikh. 61 no.6:934-943 '61. (MIRA 15:2)
(INDOLOL) (MENTAL ILLNESS)

STOLYAROV, G.V.; VOLODARSKAYA, L.I.

Psychic disorders in caffeine poisoning. Zhur. nevr. i psikh. 62 no.3:417-421 '62. (MIRA 15:3)

1. Kafedra psikhiatrii (zav. - dotsent G.V. Stolyarov) Chitinskogo meditsinskogo instituta i Chitinskaya oblastnaya psikhonevrologicheskaya bol'nitsa (glavnyy vrach L.I. Volodarskaya).

(CAFFEINE—TOXICOLOGY)
(PSYCHOSES)

BANSHCHIKOV, V.M. (Moskva); STOLYAROV, G.V. (Chita)

Adrenaline metabolism and mental disorders. Zhur. nevr. i psikh.
63 no.2:295-303 '63 (MIRA 16:11)

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BANSHCHIKOV, V.M., [illegible] STOLYAROV, G.V., [illegible]

Mental illnesses caused by stimulants of the central nervous system. Trudy [illegible] 35:342-364 '63. (MIRA 17:12)

1. Kafedra psikhiatrii 1-go Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova (zav. kafedroy prof. V.M.Banshchikov), 2 kafedra psikhiatrii Chitinskogo meditsinskogo instituta (zav. kafedroy dotsent G.V.Stolyarov).

[illegible], [illegible], kand.med.nauk

Importance of pharmacological preparations affecting biogenic amine metabolism in a psychiatric clinic. Zhur. VKhO 9 no.4:455-462 '64.
(MIRA 17:10)

BANSHCHIKOV, V.M. (Moskva); STOLYAROV, G.V. (Chita)

Mental disorders in tofranil therapy. Trudy 1-go MMI 34: 363-376 '64.

Mental disorders caused by the use of penicillin. Ibid.: 377-384 (MIRA 18:11)

L 26722-66 EWT(1) RO

ACC NR: AP6011839 SOURCE CODE: UR/0246/65/065/011/1741/1744

3/ 30 B

AUTHOR: Banshchikov, V. M. (Moscow); Stolyarov, G. V. (Chita)

ORG: none

TITLE: Sernyl, a psychotomimetic 6 with schizophrenic-like effect

SOURCE: Zhurnal nevropatologii i psikhiatrii, v. 65, no. 11, 1965, 1741-1744

TOPIC TAGS: central nervous system, brain, nervous system disease, nervous system drug, drug effect, experiment animal

ABSTRACT: This is a survey on the effects of Sernyl (1-phenylcyclohexylpiperidine hydrochloride), initially used as an anesthetic 22 locally or intravenously. All references are European or American. It induces catatonic states, amnesia, occasional excitation, and rarely hallucinations, lasting from a few hours to several days. In psychiatric tests, slow intravenous 0.03-1 mg/kg doses were used. Depersonalization is characteristic, physiologic manifestations are nystagmus, ptosis, ataxia, and decreased tactile sensitivity followed by EEG changes. Its effect on mentally sick individuals resembles that on healthy. It usually strengthens previously existing symptoms; only one case of

2

Card 1/2 UDC: 616.89-039-02 : 615.782.543.2

L 26722-66

ACC NR: AP6011839

improvement was found in the literature. The effect can be stopped by chlorpromazine. It differs somewhat from those obtained with mescaline and lysergic acid diethylamide due to the absence of hallucinations and self-observation while depersonalization and sensory isolation strongly suggest the schizophrenic syndrome. Localization of this effect in the brain is controversial and so is the Sernyl metabolism. Despite this lack of knowledge the author recommends its experimental use in mental disease. Orig. art. has: none.

SUB CODE: 06/ SUBM DATE: none/ OTH REF: 019

Card 2/2

L 04356-67 EWT(d)/EWT(m)/EWP(w)/EWP(c)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(l) IJP(c)

ACC NR: AR6029506 JD SOURCE CODE: UR/0137/66/000/006/I043/I043 43 B

AUTHOR: Gur'yev, A. V.; Stolyarov, G. Yu.

TITLE: Characteristics of development and the accumulation pattern of defective areas in steel fatigue test 16 14

SOURCE: Ref. zh. Metallurgiya. Abs. 6I291

REF SOURCE: Sb. Materialy Nauchn. konferentsii. Sovnarkhoz Nizhne-Volzhsk. ekon. r-na. Volgogradsk. politekhn. in-t. T. I. Volgograd, 1965, 260-266

TOPIC TAGS: steel, fatigue test, low carbon steel 16

ABSTRACT: A method has been developed for detecting slip bands which develop in fatigue processes. On the basis of data obtained in testing low-carbon steel, it was concluded that, although the increase in the number of damages which precedes the fatigue breakdown is inevitable, its presence does not necessarily determine further development of dangerous fatigue cracks. 16 [Translation of abstract].

SUB CODE: 11, 13/

Card 1/1 llk UDC: 539.43:669.01

L 10845-67 EWT(m)/EWP(w)/EWP(t)/ETI JD
ACC NR: AR6034736 SOURCE CODE: UR/0124/66/000/008/V073/V074

AUTHOR: Gur'yev, A. V.; Stolyarov, G. Yu.

TITLE: Nature of development and patterns of accumulation of failures in steel during fatigue tests

SOURCE: Ref. zh. Mekhanika, Abs. 8V641

REF SOURCE: Sb. Materialy Nauchn. konferentsii. Sovnarkhoz Nizhne-Volzhsk. ekon. r-na Volgogradsk. politekhn. in-t T. 1. Volgograd, 1965, 260-266

TOPIC TAGS: fatigue test, metal defect, fatigue failure, fatigue crack

ABSTRACT: A procedure has been worked out for detecting slip bands originating during fatigue tests. Cylindrical models 10 mm in diameter made of a low-carbon steel were subjected to the test by rotation and pure bending. It is concluded that the increase in the number of defective points is inevitable and precedes fatigue failure, but its existence is not a precondition for the development of dangerous fatigue cracks. Bibliography of 5 titles. V. Kolesnik. [Translation of abstract]

SUB CODE: 11/

Card 1/1

STOLYAROV, I. A.

General technique

Laboratory apparatus

Chem

5

②

2814. **Use of ultra-violet rays in analytical chemistry. III. Photometer for colorimetry in ultra-violet rays.** K. P. Stolyarov and I. A. Stolyarov (*J. anal. Chem., USSR*, 1953, 8, 33—37).—An ultra-violet photometer is described. Its application to the determination of traces of Fe in Co is given. G. S. Smith.

NF

7-27-54

STOLYAROV, Ivan Karpovich; STEPANOVA, N.D., red.; KHLOBORDOV, V.I.,
tekhn. red.

[Communists in the most important sectors of production]
Kommunisty na reshaiushchikh uchastkakh proizvodstva.
Krasnodar, Krasnodarskoe knizhnoe izd-vo, 1961. 39 p.
(MIRA 16:10)

1. Sekretar' Beloglinskogo rayonnogo komiteta KPSS (for Stolyarov).
(Communist Party of the Soviet Union--Party work)
(Belaya Glina District--Collective farms)

STOLYAROV, I.M

110-4-11/25

AUTHOR: Stolyarov, I.M., Engineer

TITLE: Application of the Frequency Method of Speed Control to a Screened ("Canned") Induction Motor (Primeneniye chastotnogo metoda regulirovaniya skorosti k asinkhronnomu ekranirovannomu elektrodvigatelyu)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, No. 4, pp. 33 - 34 (USSR).

ABSTRACT: The screened ("canned") type of squirrel-cage induction motor in which a metal sleeve or screen is interposed between the rotor and the stator is valuable for operation in autoclaves and reactors that work at high pressures. Correct selection of material for the sleeve is most important; it should be of high resistivity and its magnetic permeability should be near unity. The frequency method can be used to control the speed of such motors and was developed by Academician M.P. Kostenko. The article analyses mathematically the processes that occur in a screened type motor. Some of the electro-magnetic force set up by the stator winding is absorbed by the sleeve and a negligible quantity is reflected from it. An exponential expression is given for the magnetic field in the screen. Kostenko's expression for the characteristics required of the motor is modified for the case when frequency control of speed is used.

Card1/2

PREVO, A.A., kand. biolog. nauk; STOLYAROV, K.D.; KAKORIN, I.S.

Let's establish large turkey farms in the Northern Caucasus. Ptitsevodstvo 9 no.6:36-38 Je '59. (MIRA 12:10)

1.TSentral'nyy nauchno-issledovatel'skiy institut ptitsepererabatyvayushchey promyshlennosti (for Prevo). 2.Direktor Krasnodarskogo tresta ovoshchnykh i ptitsevodcheskikh sovkhozov (for Stolyarov). 3.Starshiy zootekhnik Krasnodarskogo tresta ovoshchnykh i ptitsevodcheskikh sovkhozov (for Kakorin).
(Caucasus, Northern--Turkeys)

VISHNEVSKIY, Nikolay Yevgen'yevich, kand.khim.nauk; GLUKHANOV, Nikolay Parmenovich, kand.tekhn.nauk; KOVALEV, Ivan Sidorovich, kand. tekhn.nauk; DOBROKHOTOV, G.N., kand.tekhn.nauk, retsenzent; STOLYAROV, I.M., inzh., retsenzent; BORODULINA, I.A., red.izd-va

[High-pressure equipment with an airtight drive] Apparatura vysokogo davleniia s germeticheskim privodom. Izd.2., ispr. i dop. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 246 p. (MIRA 13:7)
(Electric driving) (High-pressure research)

KRASIL'SHCHIK, B.Ya.; VERBLOVSKIY, A.M.; Prinimali uchastiye: BELKIN, L.A.;
DMITRIYEV, L.I.; STOLYAROV, I.M.
Automatization of feeding pulverized coal in slag treatment by
the fuming process. TSvet. met. 33 no.6:31-36 Je '60.
(MIRA 14:4)

(Zinc—Metallurgy) (Automatic control)

STOLYAROV, I.M., inzh.

Magneto-transistor amplifier. Vest.elektroprom. 33 no.4:51-54
Ap '62. (MIRA 15:4)
(Electric driving) (Magnetic amplifiers)

L 18017-63

ACCESSION NR: AP3004223 S/0105/63/000/007/0066/0069

AUTHOR: Stolyarov, I. M.

45

TITLE: Magnetic semiconductor amplifier with a magnetic key

SOURCE: Elektrichestvo, no. 7, 1963, 66-69

TOPIC TAGS: magnetic semiconductor amplifier

ABSTRACT: A magnetic-semiconductor amplifier with a semiconductor key was investigated by the author in an earlier work (Vestnik elektropromy*shlennosti, no. 4, 1962). For heavier loads and wider regulation range, a modification of the amplifier that uses an autotransformer circuit and a magnetic key is suggested. A circuit diagram, physical-phenomena diagrams, a load-current oscillogram, and an input-output characteristic of the new amplifier are supplied. The physical phenomena are described in detail, and pertinent formulas are derived. Orig. art. has: 5 figures and 21 formulas.

ASSN: LENINGRAD MINING INSTITUTE

Card 1/[illegible]

STOLYAROV, I.M., inzh.

Three-phase transistorized magnetic amplifier. Vest. elektroprom.
34 no.8:26-30 Ag '63. (MIRA 16:9)
(Magnetic amplifiers)

IKRAMOV, R.Z., inzh.; STOLYAROV, I.M., inzh.

Automation of the starting up of an electric mine locomotive with alternating current. Izv.vys.uchev.zav.;gor.zhur. 7 no. 4:163-167 '64. (MIRA 17:7)

1. Leningradskiy ordenov Lenina i Trudovogo Krasnogo Znameni gornyy institut imeni G.V.Plekhanova. Rekomendovana kafedroy obshchey elektrotekhniki.

STOLYAROV, Isaak Moiseyevich; IVANOV, S.V., nauchn. red., RASKINA, T.L., red.

[Magnetic amplifiers with transistor and magnetic switches] Magnitnye usiliteli s poluprovodnikovymi i magnitnymi kliuchami. Moskva, Energiia, 1965. 78 p. (Biblioteka po avtomatike, no.133) (MIRA 18:7)

Chemical Abst
Vol. 48 No. 8
Apr. 25, 1954
Analytical Chemistry

Use of ultraviolet rays in analytical chemistry. II. Microchemical analysis with ultraviolet rays. K. P. Stolyarov (A. A. Zhdanov Leningrad State Univ.). J. ~~Anal. Chem.~~ (U.S.S.R.) 7, 221-8(1952)(Engl. translation). —See C.A. 47, 15316. H. L. H.

STOLYAROV, K.P.

3

Use of ultraviolet rays in analytical chemistry. II. Qualitative microchemical analysis with ultraviolet rays. K. P. Stolyarov. Chem. Tech. (Berlin) 5, 431-6(1953). See C.A. 47, 7315. Earl S. McCoy.

STOLYAROV, K. P.
General technique
Laboratory Apparatus

Chem
5
②

2014. Use of ultra-violet rays in analytical chemistry. III. Photometer for colorimetry in ultra-violet rays. [redacted] and I. A. Stolyarov (J. anal. Chem., USSR, 1953, [illegible], 33—37). An ultra-violet photometer is described. Its application to the determination of traces of Fe in Co is given. G. S. Smith.

AF
7-27-54

MORACHEVSKIY, Yu.; STOLYAROV, K.P.; STOLYAROVA, I.A.

New data on the use of ultraviolet rays in qualitative microchemical analysis and quantitative colorimetric analysis. Vest. LGU 8 no.5:113-122 My '53. (MIRA 12:7)
(Ultraviolet rays) (Chemistry, Analytic--Qualitative)
(Colorimetry)

STOLYAROV, K.P.

Microchemical detection of alkali-metal cations in ultraviolet rays. Uch.zap.Len.un. 163:209-214 '53. (MLRA 9:6)

1.Kafedra analiticheskoy khimii.
(Alkali metals) (Ultraviolet rays)

STOLAROV, K. P.

USSR/Chemistry - Volumetric analysis

Card : 1/1

Authors : Stolyarov, K. P.

Title : Application of ultraviolet rays in analytical chemistry. Ceriometry with ultraviolet rays

Periodical : Zhur. Anal. Khim., 9, Ed. 3, 141 - 149, May-June 1954

Abstract : The principle of ceriometric determinations in ultraviolet rays is explained. The difficulties involved in the use of the chemoscope for analytical purposes are outlined and a new device for the titration in ultraviolet rays is described. Data are presented on ceriometric determinations of Sb, Sn, Sr, Ca, Cd, Ag, Pb, Sn-Sb combination, etc. Twelve references: 4-USSR, 5-German, 2-USA, 1 English. Tables.

Institution : The A. A. Zhdanov State University, Leningrad

Submitted : September 23, 1952

STUDYAROV, K. P.

USSR.

495. **Apparatus for titrations in ultra-violet light.** K. P. Studyarov ~~(Zh. Zavod. [illegible]~~ [illegible] ~~[illegible]~~ Khim. Zh. No. 11, 220-224; *Referativnyi Zh., Khim.*, 1954, Abstr. No. 36 302). — An apparatus for titrations in ultra-violet light is described. A filter with maximum transmission at 365 mμ is used, and the liquid to be titrated is contained in a beaker of ordinary glass.

I. Hovey

STOLYAROV, K.P.

Fluorescent detection of Gallium and

[illegible] K. P. Stolyarov [illegible]

STOLYAROV, K. P.

[illegible]

In the last case, the degree of [illegible] is heated on quartz glass [illegible]

[illegible]

STOLYAROV, K.P.

6

of the soln. to be investigated on a watch glass with 1 drop of concd. HNO_3. The dried residue is leached with water and the testing continued as above. According to another variation, add 1-2 drops of KCl soln. and 1-4 drops of water to 1 drop of the soln. on a watch glass. The ppt. is filtered, washed, and 2 drops of water and a small crystal of Seignette's salt is added (Sb dissolves). The ppt. is filtered and the analysis carried out as above. The detectable min. is [illegible] with heating [illegible]

N. [illegible]

2/2

MT

Microchemical detection [illegible]

[illegible]

[illegible] Cu, Pb, Cd, and [illegible] under a microscope [illegible] In the presence of Co, the [illegible] with excess of [illegible] NH_4OH [illegible] the soln. [illegible] of 10% H_2S [illegible] NH_4OH satd. with NH_4Cl to a drop of the soln. [illegible] on a slide, and observe the cryst. under a microscope. In the presence of Cu^{++} [illegible] ppt. is red. (3). Add 3-4 drops of concd. NH_4OH to a drop of the soln. to be tested. [illegible] In the presence of Cu^{++} [illegible] slide, place a drop of $(NH_4)_2C_2O_4$. A few sec. after that form a cryst. ppt. [illegible] under the microscope. [illegible] Mix a drop of Cu^{++} salt soln. with a drop of freshly [illegible] Na_2SO_4 soln. on a slide. Under the microscope the crysts. is red. The detectable min. for methods 1, 2, 3, 4, and 5 is resp., 0.05, 0.1, 0.2, 0.15, and 0.25 [illegible] limiting concn. 1:200,000; 1: [illegible] 1:17 [illegible]

[illegible] Vasil [illegible]

Category: USSR/Analytical Chemistry - General Questions. G-1

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30955

Author : Stolyarov K. P., Pogodayeva V. G.
Inst : Leningrad University
Title : Chromometry in the Ultraviolet Region of the Spectrum

Orig Pub: Vestn. Leningr. un-ta, 1956, No 10, 87-92

Abstract: Solutions of Cr(2+) salts are suitable for titrimetric determination of Fe, Cr, Mn, Ce after their conversion to higher degrees of oxidation, and also of elemental I_2 in the ultraviolet region of the spectrum. A method is described of successive determination of Fe and Cr, Fe and Mn by means of a solution of Cr(2+) salt, in natural silicates without a preliminary separation of associated elements. After removal of SiO_2, Mn, Fe and Cr are oxidized to MnO_4^-, Fe(3+) and $Cr_2O_7^{2-}$. In aliquot portions of the solution a determination is made of Fe(3+), then of the sum of Fe(3+) and MnO_4^-, and the amount of Mn is determined by difference. The Fe and Cr are determined in an analogous manner, Ti does not interfere.

Card : 1/1

100 γ/ml., bright blue at 10 γ/ml., light blue at 1 γ/ml., and violet-blue at 0.1-0.01 γ/ml. Special tests show the possibility of Tl detection in the presence of other substances present in sulfide ores, when Sn, Zn, and Ni concns. exceed the Tl concn. 200,000 times and Cd 400,000 times. Fe^{+++}, Hg^{+} and Cu^{++}, and Pb^{++} interfere because of the I deposition when these ions interact with KI and the [illegible] iodide forms a film which absorbs ultraviolet rays. The formation of complex cyanides with Fe and [illegible] [illegible] interference with Tl detection. The tests are [illegible] by placing some powd. sample upon a [illegible] adding a drop of HCl, 1 drop of 0.5N KI, drying at [illegible] and examg. the luminescence under a [illegible] lamp.

W. M. Sternberg

Category : USSR/Optics - Optical methods of analysis Instruments K-7

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 2549

Author : Stolyarov K P , Karapetyan, G.O.
Inst : Leningrad State University, USSR
Title : Photometer with Type FS-K1 Photoresistor for Spectral Analysis in Flames

Orig Pub : Zavod Laboratoriya 1956, 22, No 4, 501-502

Abstract : Description of photometer for spectral analysis in flames for stationary and field conditions The substance investigated is placed in the FS-K1 photoresistance after passing through a glass or interference light filter. The measurement is with a 500-microampere meter with a shunt. The principal electric diagram of the photometer is given The errors in the determination of K in pure salts containing an equal amount of Na, did not exceed 5% of the measured quantity

Card : 1/1

54-10-2-13/16

AUTHOR: Stolyarov, K.P.

TITLE: New Reactions of the Qualitative Microchemical Detection of Vanadium and Titanium (Novyye reaktsii kachestvennogo mikrokhimicheskogo otkrytiya vanadiya i titana)

PERIODICAL: Vestnik Leningradskogo Universiteta, Seriya fiziki i khimii, 1958, Vol.10, Nr 2, pp. 122-125 (USSR)

ABSTRACT: In the present paper the author deals with the elaboration of methods for the qualitative microchemical detection of vanadium and titanium in natural as well as in other objects. In the analysis of silicate rocks and -ores the detection of titanium requires a rather complicated preparation. Moreover, it is possible only if the hydroxides of other elements precipitated by the reagent concerned behave in a different manner either with respect to diluted mineral acids or with respect to ultraviolet rays with λ = 365 mμ. It is shown (table 1) that, after precipitation with ammonia and after treatment with sulfuric acid, not only metatitanium acid remains in the precipitate, but also silicon acid, sulfates of alkali-earth metals, and lead sulfates, which do not absorb ultraviolet rays with λ = 365 mμ. The sensitivity of reaction is characterized

Card 1/2

New Reactions of the Qualitative Microchemical
Detection of Vanadium and Titanium

[illegible]-10-2-13/16

by the detected minimum of titanium of 0.5 μgr with a limit of dilution of 1:10^5. The reaction of the qualitative detection of titanium in the ultraviolet spectral range is specific. The reaction was applied for the determination of the presence of titanium in two steel samples (with and without titanium) and in two samples of sulfide ores which, besides titanium, contained also vanadium, lead, copper, cadmium, and several other elements. Decomposition was carried out by existing methods (Ref 2). For the elaboration of methods for the microchemical qualitative detection of vanadium a large number of vanadium compounds in the ultraviolet spectral range of from 250-400 mμ was studied. Sensitivity of reaction is characterized by the detected minimum of 0.03 μgr in the case of a dilution limit of 1:10^4. By means of the elaborated reaction the presence of vanadium in 2 steel samples and in 3 ore samples (with and without vanadium) was determined. Besides vanadium, also titanium, lead, copper, zinc, molybdenum, silver, gallium, nickel, and cobalt were found to be present. A.L.Razzhivina and L.V.Kuznetsova assisted in this work. There are 1 table, and 2 Soviet references.

SUBMITTED: December 16, 1957

AVAILABLE: Library of Congress

Card 2/2

1. Ores—Vanadium—Determination 2. Ores--Titanium—Determination 3. Vanadium—Determination—Test methods 4. Titanium—Determination —Test methods

75-13-2-17/27

AUTHORS: Stolyarov, K. P., Ivanov, V. S.

TITLE: Photometric Determination of Crotonaldehyde in the Ultraviolet Spectrum Range
(Fotometricheskoye opredeleniye krotonovogo al'degida v ul'trafioletovoy oblasti spektra)

PERIODICAL: Zhurnal analiticheskoy khimii, 1958, Vol. 13, Nr 2, pp. 246-249 (USSR)

ABSTRACT: At present a satisfying quantitative determination method for crotonaldehyde in presence of other organic compounds, as for instance acetaldehyde, acetone, acetylene, acetic acid, does not exist as yet. Crotonaldehyde, however, is found in the mixture of compounds of this kind in the reaction products of some organic syntheses, e.g. in the industry of synthetic rubber. The methods for the determination of crotonaldehyde, described in publications (refs 1,2) are based upon the reactions of functional groups, which, however, are not specific for crotonaldehyde and therefore cannot be used for the determination in the presence of other unsaturated or of other carbonyl compounds. In this paper the authors try to work out a quantitative determination method, which is specific for crotonaldehyde. Such a method is the photometric

Photometric Determination of Crotonaldehyde in the Ultraviolet Spectrum Range 75-11-2-17/27

determination in the ultraviolet range of the spectrum. Solutions of crotonaldehyde and admixtures of various quantities of acetaldehyde, acetic acid, acetone, and acetylene in aqueous and anhydrous media were examined. From a comparison of the absorption curves of all these compounds in the ultraviolet range can be seen, that at 265 mμ only crotonaldehyde has an absorption band. This fact permits its photometric determination without precedent separation of the above mentioned organic compounds. First crotonaldehyde was determined besides acetic acid, acetaldehyde, acetone, and acetylene in aqueous solutions. Aqueous solutions of crotonaldehyde obey Beer's law in a concentration range of from 0.1-12.8 per cent by volume. Therefore in this interval the spectrophotometric determination is possible. Also the influence of the admixed compounds and their maximum concentrations, at which the quantitative photometric determination of the crotonaldehyde is still possible were investigated and are given in the work. In case of

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Photometric Determination of Crotonaldehyde in the Ultraviolet 75-11-3-17/17
Spectrum Range

simultaneous presence of all mentioned components the maximum permissible percentage of the separate admixtures is, in case of the highest examined concentration of crotonaldehyde (11,6 per cent by volume, for acetaldehyde and acetic acid 2 percent by volume each and for acetone 1 percent by volume. Acetylene, even in high excess quantity, does not disturb the determination of crotonaldehyde.

The author investigated also conditions for the spectrophotometric determination of crotonaldehyde in acetaldehyde, acetone, and acetic acid as solvents. The optical density of the solutions of crotonaldehyde in acetaldehyde and acetone practically is the same and depends within a wide range linearly on the concentration of the crotonaldehyde. This allows the determination of crotonaldehyde in these both non-aqueous solvents. The presence of acetic acid in acetaldehyde or in acetone much reduces the results of the determination, the used solvents therefore must be free from acetic acid. Acetylene does not disturb the determination.

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Photometric Determination of Crotonaldehyde in the Ultraviolet Spectrum Range 75-13-2-17/27

There are 5 figures, 7 tables, and 15 references, [illegible] of which are Soviet

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

SUBMITTED: October 20, 1956

1. Acetaldehyde--Analysis 2. Crotonaldehyde--Determination
3. Photometry 4. Ultraviolet spectrum

Card 4/4

STOLYAROV, K.P.

Qualitatively microchemical determination of titanium and vanadium [with summary in English]. Vest. LGU 13 no.10:122-125 '58.
(Vanadium--Spectra) (MIRA 11:6)
(Titanium--Spectra)
(Microchemistry)

Stolyarov, K.P.

5(2) PHASE I BOOK EXPLOITATION SOV/2946

Leningrad. Universitet

Voprosy khimii (Problems in Chemistry) [Leningrad] Izd-vo Leningradskogo univ., 1959. 160 p. (Series: Its: Uchenyye zapiski, no. 272) (Series: Leningrad. Universitet. Khimicheskiy fakul'tet. Uchenyye zapiski. Seriya khimicheskikh nauk, vyp. 18) 1,600 copies printed.

Resp. Ed.: A. G. Morachevskiy; Ed.: Ye. V. Shchemeleva; Tech. Ed.: S. D. Vodolagina.

PURPOSE: This book is intended for chemists in research and industry as well as for teachers and students in chemical vuzes.

COVERAGE: This collection of eighteen articles on various branches of chemistry, mainly physical and analytical, was compiled on the basis of experimental research by the Chemistry Department of Leningrad University. The articles deal chiefly with methods of isolating rare earths in pure form and identifying them. No personalities are mentioned. References accompany individual articles.

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Kheyfets, V. L., and B. S. Krasikov. The Influence of Surface-Active Substances on the Discharge Kinetics of Some Cations 3

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Morachevskiy, Yu. V., and G. V. Yefremov. The Problem of Analytically Determining Thallium in Ores and Industrial Waste Products 105

Morachevskiy, Yu. V., and A. I. Novikov. Coprecipitation of Small Amounts of Several Elements With Metal Hydroxides. I. Coprecipitation of Strontium With Iron, Titanium, Aluminum and Beryllium Hydroxides 112

II. Coprecipitation of Small Amounts of Rare Earth Elements With Iron, Titanium, Aluminum and Beryllium Hydroxides 123

III. Coprecipitation of Cesium, Rhenium and Zirconium With Iron Oxide 129

Morachevskiy, Yu. V., and L. N. Zaytsev. Coprecipitation of Small Amounts of Rare Earth Elements With Metal Hydroxides. IV. Coprecipitation of Europium With Iron- and Aluminum-Hydroxides 134

5(4)

AUTHOR: Stolyarov, K. P. SOV/54-59-2-22/24

TITLE: Microfluorometric Determination of the Thallium Content in Ores (Mikrofluorometricheskoye opredeleniye soderzhaniya talliya v rudakh)

PERIODICAL: Vestnik Leningradskogo universiteta. Seriya fiziki i khimii, 1959, Nr 2, pp 149-152 (USSR)

ABSTRACT: In this investigation, which was already carried out in 1956-57 with co-operation of B. I. Mel'nikov, the possibility of using the rhodaminate of the thallium tetrabromide for the fluorometric determination of a low thallium content in natural objects was examined. The basis for this investigation is the fact that heavy metals form anion bindings with rhodamine B, which are easily soluble in benzene, and that the benzene solution fluoresced at irradiation of ultraviolet light (365 m), the fluorescent light changing, depending on the thallium content in the solution, from orange-red to pink. The determination of the thallium content was carried out in two ways: 1) by evaluation of the fluorescence intensity from standard series, 2) by means of a calibration curve of a certain stand-

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ard. The standard solutions were prepared of the initial solution 50 γTl^{+3} ion in 1 ml of solution by diluting aliquot parts of the initial solution with water. The comparison of the fluorescence intensity of the solution to be investigated and the standard solution was carried out on a fluorometer built according to the photometer by Pulfrich (Fig 1, scheme of the fluorometer). The calibration curves for standards with thallium contents of 20, 10, and 0.7 γ of thallium are represented in the figures 2. The first method could only be used up to a thallium content of 0.5 γ of Th per ml of solution, the second method was sensitive up to 0.05 γ/ml. Bivalent Hg and Sb in the solution disturbed the investigation because the rhodaminates of these metals fluoresced with orange-red light. After washing out these two elements, the determination of thallium was well possible (see Table 1). The method worked out was applied to 5 samples of sulphide- and polymetal ores. The results of these investigations are compiled in table 2. It also shows the results of a parallel investigation for the determination of the thallium content by the colorimetric

SOV/54-59-2-22/24

Microfluorometric Determination of the Thallium Content in Ores

method with methyl violet. The results of the two methods are nearly coincident. There are 2 figures, 2 tables, and 2 references.

SUBMITTED: November 14, 1958

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5(2)

AUTHORS: Stolyarov, K. P., Grigor'yev, N. N. SOV/75-14-1-14/32

TITLE: A New Luminescence Method of Microchemical Analysis (Crystallophosphoric) (Novyy lyuminestsentnyy metod mikrokhimicheskogo analiza (kristallofosfornyy)) Communication 1. Detection of Antimony (Soobshcheniye 1. Otkrytiye sur'my)

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 1, pp 71-74 (USSR)

ABSTRACT: A mercury-quartz lamp of the PRK-4 type was used as a source of ultraviolet rays in the authors' investigation of the microcrystalloscopic luminescence analysis. A capillary served to record the samples (some thousandths of ml). The precipitates were separated by filtering or centrifuging. A scheme of the device employed is shown in an illustration. Also a method for the detection of antimony is worked out in the present paper. It is based on the formation of the crystal phosphor CaO.Sb, which has a yellow-green luminescence under ultraviolet irradiation. An accurate description is given of the preparation of annealed calcium oxide, on which the reacti takes place. The color of luminescence changes in dependence on

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A New Luminescence Method of Microchemical Analysis SOV/75-14-1-14/32
(Crystallophosphoric). Communication 2. Detection of Antimony

the antimony concentration. It [illegible] from greenish to yellow
in high concentrations, and from [illegible] in the case of
low ones. The [illegible] 0.0[illegible] antimony
ions and a maximum dilution [illegible] Al, Pb, Ag(I), Hg(II),
Al, Zn, Sn, [illegible] form crystal phosphor substances with
CaO. The detection of antimony in the presence of the above
elements is only [illegible] condition that the absolute
content of these [illegible] in the [illegible] do not exceed a fixed
maximum value. The maximum values are specified for each of
the mentioned elements. Mn, Co, Ni, Cu, Cr(III) and Fe do not
form crystal phosphor substances with CaO, but they are a
source of disturbance in the detection of antimony, as they
extinguish or at least cause the appearing luminescence to dim
strongly. Another specification in the paper shows the maximum
admissible amounts of these elements in the determination of
Sb(III). The detection of antimony is also possible by the aid
of potassium ferrocyanide. The sequence chosen for the process
exerts an important influence upon the sensibility of the
reaction. The forming crystal phosphor $K_4[Fe(CN)_6].Sb$ has a
strong yellow luminescence under ultraviolet ($\lambda > 313 m\mu$)

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A New Luminescence Method of Microchemical Analysis SOV/75-14-1-14/32
(Crystallophosphoric). Communication 1. Detection of Antimony

irradiation. The procedure followed for the determination is accurately described. The limit of determinability is at 0.001 γ antimony ions and a maximum dilution of 1 : 10^7. As many elements yield precipitations with potassium ferrocyanide, the separation of antimony by extraction with diethyl ether from hydrochloric solution is recommended. The maximum amounts of Sn, Ge and Cu, which allow the detection of antimony without separation, are specified. The detection methods described are applicable for the quantitative analysis of mineral raw substances and alloys. The treatment of these substances and the detection of antimony are very accurately described. There are 1 figure and 4 tables.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova
(Leningrad State University imeni A. A. Zhdanov)

SUBMITTED: November 14, 1957

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5(2)
AUTHORS: Stolyarov, K. P., Grigor'yev, N. N. SOV/75-14-4-22/30

TITLE: New Luminescence Method of Microchemical Analysis (Crystallophosphoric) Communication 2. Detection of Tin

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 4, pp 491-492 (USSR)

ABSTRACT: It is easy to determine tin ions with potassium iodide on paper as a crystallized phosphorescing substance is formed (Ref 1). The solutions of the chlorides, bromides, and iodides of sodium and potassium were tested as reagents to tin. Potassium iodide which gives a bright yellow luminescence with solutions of tin salts proved to be the best reagent. This luminescence appears after drying of the reaction products and irradiation with ultra violet light. There is a difference between the luminescence of potassium iodide activated by tin and the luminescence of a potassium iodide crystal activated by thallium in the color and by the fact that the color is independent of the concentration of tin. The variations of the tin concentration only cause a variation in the intensity of the color. The authors investigated the sensitivity of this reaction. The limit of detection is

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New Luminescence Method of Microchemical Analysis (Crystallophosphoric) Communication 2. Detection of Tin SOV/75-14-4-22/30

0.02 μg of tin at a maximum dilution of 1 : 5.10^5. The sensitivity increases when the paper underlayer is replaced by an unglazed porcelain plate. In this case the smallest detectable quantity in a maximum dilution of 1 : 5.10^6 is 0.0002 μg. The order in which the analysis is conducted is of great influence on the sensitivity of the reaction. There is a detailed description of the developed determination method. The elements disturbing the analysis are divided into two groups (Ref 1). Elements forming similar crystallized, phosphorescing substances, and causing therefore disturbance, are Hg_2^+, Tl^+ and partly also Ag^+ and Cu^+. The elements of the second group quench the luminescence of crystallo phosphorus. They are Hg^{2+}, Sb^{3+}, Bi^{3+}, As^+, Ag^+, Pb^{2+}, Fe^{3+} and Cu^{2+}. Zinc, cobalt, nickel, germanium, zirconium, thallium, indium, titanium, cadmium, manganese, tungsten, molybdenum and bivalent iron do not disturb the determination of tin. The determination of tin in the presence of mercury ions is possible if more potassium iodide is added. The disturbing effect of small quantities of thallium can also be eliminated

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New Luminescence Method of Microchemical Analysis SOV/75-14-4-22/30
(Crystallophosphoric) Communication 2. Detection of Tin

by making the determination with ultraviolet rays of $\lambda = 365 \text{ m}\mu$. Large quantities of thallium are better to separate by extraction of tin. The ions of Sb^{3+} , Bi^{3+}, As^{3+}, Ag^{+} and Pb^{2+} form strongly adsorbing iodide precipitates. Silver iodide itself can also be luminescent but this luminescence does not occur under the conditions needed for determining tin. The maximum permissible concentration ratios for these disturbing elements in the determination of one drop of 0.001 ml volume tin (at 0.002 μg Sn^{2+} ions) are the following:

$Sn^{2+} : Sb^{3+} = 1 : 100,000$; $Sn^{2+} : Bi^{3+} = 1 : 100,000$;
$Sn^{2+} : As^{3+} = 1 : 10,000$; $Sn^{2+} : Ag^{+} = 1 : 30,000$;
$Sn^{2+} : Pb^{2+} = 1 : 10,000$; $Sn^{2+} : Cu^{2+} = 1 : 1,000$.

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New Luminescence Method of Microchemical Analysis (Crystallophosphoric) Communication 2. Detection of Tin SOV/75-14-4-22/30

There is a separate description of the determination of tin in sulfidic substances and in alloys. There are 3 Soviet references.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

SUBMITTED: November 14, 1957

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STOLYAROV, K.P.

Microfluorometric determination of the thallium content of ores.
Vest.LGU 14 no.10:149-152 '59. (MIRA 12:6)
(Thallium--Analysis)

[illegible]

[illegible], Vol. [illegible] [illegible]-111 [illegible]

([illegible]istry, [illegible]) ([illegible])

YEFREMOV, O.V.; STOLYAROV, K.P.

Photometric determination of thallium in the ultraviolet region of the spectrum. Uch.zap.LGU no.272:99-104 '59. (MIRA 13:1)

(Thallium--Spectra)

K P

PHASE I BOOK EXPLOITATION SOV/4973

Soveshchaniye po lyuminestsentsii, 8th, 1959

Metody lyuminestsentnogo analiza; materialy soveshchaniya (Methods for Luminescence Analysis; Materials of the 8th Conference) Minsk, Izd-vo AN BSSR, 1960. 147 p. 1,000 copies printed.

Sponsoring Agency: Akademiya nauk Belorusskoy SSR. Institut fiziki.

General Ed.: N. A. Borisevich; Ed.: L. Timofeyev; Tech. Ed.: N. Siderko.

PURPOSE: This collection of articles is intended for chemists and physicists interested in molecular luminescence, and for scientific personnel concerned with applications of this and related phenomena in research in the life sciences.

COVERAGE: The collection contains 28 papers read at the Eighth Conference on Luminescence, which took place 19-24 October, 1959 [place of conference not given]. These studies are concerned principally with the development of new luminescence methods for quantitative

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and qualitative chemical analysis, and with the applications of luminescence in medical and biological research. They discuss luminescence methods for the determination of uranium, mercury, magnesium, aluminum, boron, and other elements, as well as luminescence methods for the diagnosis of skin cancer and the detection of grippe virus, pathogenic microorganisms, etc. The structural design of new instruments for luminescence analysis is described. The conference was not concerned with studies on the phosphorescence of crystal phosphores. There is a discussion of the contributions of Soviet specialists in molecular luminescence in the course of the year and a half preceding the conference. The articles of V. K. Matveyev (p. 75) and of V. V. Patrikeyev (p. 79) have been annotated because of their importance. No personalities are mentioned. References accompany most of the articles.

TABLE OF CONTENTS:

Levshin, V. L. Opening Address 3

Stolyarov, K. P., and N. N. Grigor'yev [Leningradskiy gosudarstvennyy universitet imeni A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)]. Qualitative and Quantitative Luminescence [illegible] of [illegible] Ions 32

Shcherbov, D. P., R. N. Korzheva, and A. I. Ponomarenko [Kazakhskiy institut mineral'nogo syr'ya (Kazakh Institute of Mineral Raw Materials)]. Determination of Boron with Benzoin with the Aid of the Objective Fluorometer for Liquids 37

STOLYAROV, Konstantin Pavlovich; PIASTRO, V.D., red.; ZHUKOVA, Ye.G., tekhn.red.

[Methods of microchemical analysis] Metody mikrokhimicheskogo analiza. Leningrad, Izd-vo Leningr.univ., 1960. 189 p. (MIRA 13:2)

(Chemistry, Analytical)

STOLYAROV, K.P.; GRIGOR'YEV, N.N.

New microluminescence method of titrating small amounts of a substance in solutions. Determination of small amounts of zirconium. Vest.LGU 15 no.10:137-143 '60. (MIRA 13:5)
(Zirconium--Analysis)

STOLYAROV, K.P.

Titanometry in the ultraviolet region of the spectrum. Uch. zap.
LGU no.297:137-143 '60. (MIRA 13:11)
(Titanium) (Ultraviolet rays)
(Chemistry, Analytical—Quantitative)

STOLYAROV, K.P.; DRACHEV, V.I.

Photometric method for determining small amounts of copper in soils and plant ash. Uch. zap. LGU no.297:162-169 '60.
(MIRA 13:11)

(Copper--Analysis)

PHASE I BOOK EXPLOITATION SOV/3632

Stolyarov, Konstantin Pavlovich

Metody mikrokhimicheskogo analiza (Methods of Microchemical Analysis) [Leningrad] Izd-vo Leningr. univ., 1960. 189 p. Errata slip inserted. 4,200 copies printed.

Sponsoring Agency: Leningrad. Universitet. Redaktsionno-izdatel'skiy sovet.

Ed.: V.D. Piastro; Tech. Ed.: Ye.G. Zhukova.

PURPOSE: The book is intended for scientific workers, instructors and students at chemical schools of higher education and may also be useful to personnel of factories and research laboratories engaged in microchemical analysis.

COVERAGE: The book reviews the basic methods of qualitative and quantitative inorganic microchemical analysis. The microcrystalloscopic, drop, absorption, and luminescence methods of qualitative analysis and the gravimetric, volumetric, and colorimetric

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POGODAYEVA, V.G.; STOLYAROV, K.P.

Conditions for the colorimetric determination of small amounts of chromium in ultraviolet light. Uch. zap. LGU no.297:170-174 '60. (MIRA 13:11)

(Chromium--Analysis) (Ultraviolet rays)

STOLYAROV, Konstantin Pavlovich; TYUMENEVA, S.T., inzh., red.; SHILLING, V.A., red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Luminescent methods of the detection and determination of inorganic ions; stenographic report] Metody liuminestsentnogo otkrytiia i opredeleniia neorganicheskikh ionov; stenogramma doklada. Leningrad, Leningr. Dom nauchno-tekhn. propagandy, 1961. 45 p. (MIRA 14:7)
(Luminescence) (Chemistry, Analytical)

STOLYAROV, K.P.; GRIGOR'YEV, N.M.; CHEN' GO-LYAN [Ch'ên Kuo-liang]

Microphotometric titration of substances in the ultraviolet with end-point recording. Report No. 1: Design of a microtitrimeter and determination of iron. Zhur. anal. khim. 16 no. 1:4-7 Ja-F '61. (MIRA 14:2)

1. A.A. Zhdanov Leningrad State University.
(Microchemistry) (Iron—Analysis)
(Titrimeters)

STOLYAROV, K.P.

Photometric determination of small amounts of cobalt in the form of trivalent cobalt diethyldithiocarbaminate. Zhur. anal. khim. 16 no. 4:452-457 Jl-Ag '61. (MIRA 14:7)

1. A.A. Zhdanov Leningrad State University.
(Cobalt—Analysis) (Carbamic acid)

STOLYAROV, K.P.; GRIGOR'YEV, N.N.; SOLOV'YEVA, L.A.

New microluminescence method for the titration of small amounts of substance in solutions. Report No.2: Determination of small quantities of strong acids in solution. Zhur.anal.khim. 17 no.1: 28-30 Ja-F '62. (MIRA 15:2)

1. A.A.Zhdanov Leningrad State University.
(Acids) (Luminescence)

STOLYAROV, K.P.; GRIGOR'YEV, N.N.

New microluminescence method of titration of small amounts of a substance in solutions. Report No.3: Determination of aluminum. Zhur.anal.khim. 17 no.5:565-567 Ag '62. (MIRA 16:3)

1. A.A.Zhdanov Leningrad State University.
(Aluminum--Analysis) (Luminescence)

ZVEREVA, Mariya Nikolayevna; STOLYAROV, K.P., red.; FREGER, D.P., red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Use of ion exchangers in analytical chemistry] Primenenie ionitov v analiticheskoi khimii; stenogramma lektsii, prochitannoi v LDNTP na kratko-srochnom seminare po metodam khimicheskogo analiza. Leningrad, Leningr. dom nauchno-tekhn. propagandy, 1963. 18 p. (MIRA 16:6)
(Ion exchangers) (Chemistry, Analytical)

STOLYAROV, Konstantin Pavlovich; POGODAYEVA, V.G., red.; FREGER,
D.P., red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Spectrophotometric determination of inorganic ions in the ultraviolet range of the spectum] Spektrofotometricheskoe opredelenie neorganicheskikh ionov v ul'trafioletovoi oblasti spektra; stenogramma lektsii, prochitannoi v LDNTP na kratkosrochnom seminare LDNTP po khimicheskim metodam analiza. Leningrad, Leningr. dom nauchno-tekhn. propagandy, 1963. 49 p.
(MIRA 16:6)

(Ions—Absoprtion spectra)

[illegible]

Photometric determination of small quantities of iron in the ultraviolet region of the spectrum. Vest. LGU 18 no.10: [illegible] '63. (MIRA 16:8)
(Iron compounds--Spectra) (Ascorbic acid)

ACCESSION NO. AP4010236 S/0054/63/000/004/0140/0145

AUTHOR: Stolyarov, K. P.

TITLE: Extraction-photometric determination of vanadium and tungsten

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, vy*p. 4, 1963, 140-145

TOPIC TAGS: vanadium, vanadium steel, vanadium ore, tungsten, tungsten steel, tungsten ore, oxyquinolinate of vanadium, oxyquinolinate of tungsten, chloroform extraction, spectrophotometric determination

ABSTRACT: A method for simultaneous determination of vanadium and tungsten in steel and ores was developed, based on the solubility of vanadium and tungsten oxyquinolinates in chloroform. This was followed by spectrophotometric determination SF-4 and SF-5 instruments at a wave length of 400 millimicrons. At this point the light absorption lines of the solutions of vanadium and tungsten oxyquinolinates and of their intermediate compound intersect, as presented in Fig. 1 on the Enclosure. In the case of simultaneous presence of tungsten and vanadium, the latter could be eliminated by reducing it to the four-valency state by means of 0.5% ascorbic acid at a pH of 6.0. It was found that the ions of lead, cadmium, and

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ACCESSION NO: AP4010236

arsenic do not affect the determination of tungsten and cadmium. that ions of mercury. silver. zinc. and chromium do not interfere in quantities up to 1000 times those of tungsten and vanadium. and that ions of manganese. cobalt. nickel, copper, aluminum, and uranium can be present in 50-fold quantities. On the other hand. molybdenum and ferric ions do interfere, and they have to be removed by extraction with ether from a 6-normal HCl solution. or by other means. Details of the analytical procedure on five 1-2 gram samples of steel and ore are given. The error amounts to 1% for vanadium and 2.6% for tungsten. L. V. Kuznetsova and L. N. Pesterova participated in the work. Orig. art. has: 5 tables, 3 charts, and 1 formula.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 03Feb64 ENCL: 01

SUB CODE: CH NO REF SOV: 000 OTHER: 000

Card 2/3

ACCESSION NR: AP4010236 ENCLOSURE: 01

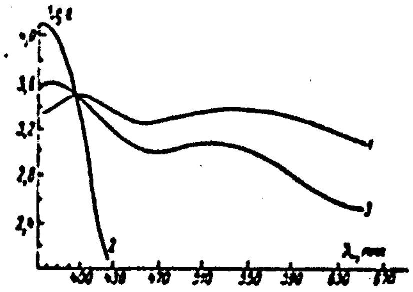

Fig. 1. Absorption curves of vanadium oxyquinolinate (1), tungsten oxyquinolinate (2), and of their mixture (3) in chloroform.

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[illegible], [illegible] Pavlovna; [illegible]LYA[illegible], red.

[Complexonometric method in the analysis of magnetic alloys] Kompleksonometricheskii metod v analize magnitnykh splavov. Leningrad. 1964. 9 p. (MIRA 17:9)

STOLYAROV, K.P.; AMANTOVA, I.A.

Spectrophotometric study of ascorbic complexes. Vest. LGU 19 no.4:132-141 '64. (MIRA 17:3)

STOLYAROV, K. P.; AMANTOVA, I. A.

Spectrophotometric study of ascorbinate complexes. Vest. LGU 19 no.10:113-122 '64. (MIRA [illegible])

[illegible]

(Experience in the application of comp[illegible] analysis
methods) Opyt primeneniia komp[illegible] metodov
analiza. Leningrad, 19[illegible]. 18 p. (MIRA 17:1)

L 25361-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG
ACCESSION NR: AP4046736 S/0054/64/000/003/0134/0139

15
B

AUTHOR: Solov'yeva, L. A.; Stolyarov, K. P.; Grigor'yev, N. N.

TITLE: Determination of small gallium concentrations by the method of microluminescent titration

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SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 3, 1964, 134-139

TOPIC TAGS: analytical chemistry, microluminescent titration, gallium analysis, microanalysis

ABSTRACT: The method of microluminescent titration described by the authors previously (see Zh. A Kh 17, 565 (1962)) is applied for the determination of small concentrations of gallium in relatively small samples (10 to 50 milligrams). The sensitivity of this simple method is between that of the titrimetric and the photometric methods. (1.0 - 10.0 μg in 2 ml samples) The microluminescent titration method was tested on artificial mixtures and on samples of ferrite, silicate,

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L 25361-65
ACCESSION NR: AP4046736

and repheline. Orig. art. has: 3 figures and 6 tables

ASSOCIATION: None

SUBMITTED: 25Jan64 ENCL: 00 SUB CODE: GC

NR REF SOV: 007 OTHER: 009

Card 2/2

L 36258-65 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 IJP(c) JD/WW/JG/GS S/0000/64/000/000/0007/0015 23 22 B+1

ACCESSION NR: AT5007806

AUTHOR: Solov'yeva, L. A.; Stolyarov, K. P.; Grigor'yev, N. N.

TITLE: The problem of determining small amounts of zirconium 21 by luminescence titration

SOURCE: Leningrad. Universitet. Metody kolichestvennogo opredeleniya elementov (Methods for the quantitative determination of elements). Leningrad, Izd-vo Leningr. univ., 1964, 7-15

TOPIC TAGS: zirconium determination, luminescence titration, zirconium ore, pentahydroxyflavone, interfering cation, ore analysis

ABSTRACT: Optimal conditions for the luminescence-titration of small amounts of zirconium in ore, the effect of accompanying cations and the composition of the luminescent complex were studied experimentally. The green-luminescent compound formed with morin (pentahydroxyflavone) was titrated with sodium fluoride and the decreasing luminescence was measured by a galvanometric technique. Spectrophotometric determination of optical densities was used to establish the composition of the complex. Maximum accuracy was reached in 1:1 mixtures of 5.2 N perchloric acid with 1:1 dilute hydrochloric acid, permitting determination of 229 - 6.9 μg

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ACCESSION NR: AT5007806

Zr with 0 - 4.3% relative error, whereas lower accuracy was achieved in 4 N H_2SO_4. Determination of Zr is feasible at 1:10 Zr/Nb ratios although niobium decreases the luminescence of the complex; aluminum does not hinder the determination of Zr under experimental conditions; copper decreases the accuracy, and ferric ions must be reduced or removed; Mn II does not impede the analysis at 1:10 Zr/Mn ratios. Zirconium in 0.22 and 0.53% concentrations in ore was determined by melting with alkali carbonate, melting the residue with potassium pyrosulfate, dissolving in 10% H_2SO_4, vaporization, dilution with water, precipitation with ammonia after adding aluminum chloride as a collector compound if very small amounts of Zr are present, and determination of Zr in the dissolved precipitate by luminescence-titration. The optical density measurements indicated that the composition of the complex corresponds to 1:2 zirconium-morin ratios. "The ore samples were provided by the TsKhL VSEGEI." Orig. art. has: 6 figures and 7 tables.

ASSOCIATION: none

SUBMITTED: 28Sep64

ENCL: 00

SUB CODE: MM ,GC

NO REF SOV: 003

OTHER: 000

Card 2/2 JG

L [illegible]-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG/ S/0000/64/000/000/0016/0021 20

ACCESSION NR: AT5007807 11

AUTHOR: Stolyarov, K. P.; Grigor'yev, N. N. B+1

TITLE: Micro-luminescence method for determining beryllium 21

SOURCE: Leningrad. Universitet. Metody kolichestvennogo opredeleniya elementov (Methods for the quantitative determination of elements). Leningrad, Izd-vo Leningr. univ., 1964, 16-21

TOPIC TAGS: beryllium determination, luminescence titration, ore analysis, pentahydroxyflavone, sulfosalicylic acid, interfering cation, acetylacetone

ABSTRACT: A method was developed for determining small amounts of beryllium in ore by micro-luminescence titration. A beryllium-morin (pentahydroxyflavone) complex, showing yellow-green fluorescence at 365 mμ after ultraviolet irradiation, was titrated with the best results with sodium sulfosalicylate solutions at pH 13 in solutions buffered with glycine. A microtitrimeter, photomultiplier, and galvanometric technique were used, which have been described in previous studies. From 94 to 0.094 μg beryllium were determined with 2.1-10.5% relative error, respectively. The effects of zinc, calcium, barium or aluminum on the results are prevented by complexing with Trilon B, whereas iron, manganese and chromium

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L 36257-65
ACCESSION NR: AT5007807

must be removed before determining beryllium. Good results were obtained by extracting beryllium as the acetylacetone complex with carbon tetrachloride at pH 9, or by removal of iron from hydrochloric acid solution by extraction with ethyl ether and coprecipitation of beryllium with calcium as the carbonate. The methods were used for determining 0.069 and 0.016% BeO with 0-12.4% relative error in basic pegmatite and in silicate rock. "T. N. Ushakova took part in the work." Orig. art. has: 4 figures and 5 tables.

ASSOCIATION: none

SUBMITTED: 28Sep 64

ENCL: 00

SUB CODE: MM, GC

NO REF SOV: 005

OTHER: 000

Card 2/2

L 36650-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/GS
ACCESSION NR: AT5007813 S/0000/64/000/000/0052/0054

AUTHOR: Stolyarov, K. P.

21

TITLE: Photometric determination of titanium in sulfide ores

SOURCE: Leningrad. Universitet. Metody kolichestvennogo opredeleniya elementov (Methods for the quantitative determination of elements). Leningrad, Izd-vo Leningr. univ., 1964, 52-54

TOPIC TAGS: titanium determination, sulfide ore, ore analysis, photometric analysis, interfering cation, interfering anion, ascorbic acid complex

ABSTRACT: Hines and Boltz's method for the quantitative determination of titanium from the optical density of its complex with ascorbic acid (Anal. chem. v. 24, 1952, 947) was adapted for determining small amounts of titanium in sulfide ores and the effect of accompanying cations and anions was studied. The optical density of 0.2-20 μg/ml Ti solutions at 365 mμ was shown to depend linearly on concentration. Most of the studied cations or anions did not interfere with the determination of Ti and the tolerances for others were 20 mg Pb, 1.5 Mg Zr, 1 mg Sn, 0.1 mg Bi, and 10 μg Hg, Sb or Ag per ml of solutions containing 1-20 μg Ti. Up to 0.8 mg molybdate or up to 0.1 mg vanadate, silicate or phosphate

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ACCESSION NR: AT5007813

ions per ml did not affect the analytic results for Ti, but fluoride ions impaired the usefulness of the method in any concentration. In sulfide ores containing 0.28 or 1.11% Ti and V, Cd, Cu, Pb and Zn, Ti was determined in the residue from alkali melts by dissolving the residue in H_2SO_4-HF, vaporization, dissolving in dilute H_2SO_4 and determining the optical density after addition of glacial acetic and ascorbic acid. The results were generally lower but in good agreement with values obtained by the hydroperoxide method. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: none

SUBMITTED: 28Sep64 ENCL: 00 SUB CODE: MM, GC

NO REF SOV: 001 OTHER: 002

L 36249-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG/GS
ACCESSION NR: AT5007815 S/0000/64/000/000/0062/0068

14
B+1

AUTHOR: Stolyarov, K. P.; Kalinin, S. K.

TITLE: Photocolorimetric determination of rare earth elements of the cerium group in steels

27

SOURCE: Leningrad. Universitet. Metody kolichestvennogo opredeleniya elementov (Methods for the quantitative determination of elements). Leningrad, Izd-vo Leningr. univ., 1964, 62-68

TOPIC TAGS: photometric analysis, steel analysis, rare earth determination, cerium determination, Arsenazo complex, interfering ion, urotropin, sulfosalicylic acid, rare earth oxalate

ABSTRACT: A method was developed for the photocolorimetric determination of La, Ce, Pr, Nd, and Sm in steels by complexing with the reagent Arsenazo (benzene-2-arsonic acid-(1-azo-7)-dihydroxynaphthalene-3,6-disulfonic acid). The experimental study covered a determination of the linear dependence of the optical density on concentration of the Arsenazo complex; measurement of the effects of accompanying ions; and the development of two alternative routes for the removal of ions which interfere with the determination of rare earth elements. The

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optical density of complexes formed by the rare earth elements with Arsenazo in the presence of sulfosalicylic acid and urotropin was shown to depend linearly on metal concentration up to 80 γ/ml but to differ for the individual elements. Most of the components of steel were shown to interfere with the colorimetric determination, indicating the necessity for separating the rare earth elements prior to colorimetric measurement. The proposed methods involve: 1) dissolving the steel specimen in hydrofluoric acid and hydrogen peroxide, evaporation, filtration of calcium and rare earth fluorides, and the repeated precipitation of rare earth elements as the oxalate with calcium; or 2) dissolving in hydrochloric acid and removal of Fe, Cr, Ni and Mn by electrolysis in the presence of perchloric acid, and coprecipitation of rare earths with calcium oxalate as in 1. Approximately 10% relative error was calculated for the determination of 1 mg Nd in 1 g steel samples. Orig. art. has: 1 figure and 2 tables.

ASSOCIATION: none

SUBMITTED: 28Sep64 ENCL: 00 SUB CODE: IC, MM

NO REF SOV: 007 OTHER: 000

Card 2/2

L 36263-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG/GS

ACCESSION NR: AT5007825 S/0000/64/000/000/0110/0116

15

AUTHOR: Pogodayeva, V. G.; Stolyarov, K. P. 21 B+1

TITLE: Comparative study of methods for concentrating chromium admixtures

SOURCE: Leningrad. Universitet. Metody kolichestvennogo opredeleniya elementov (Methods for the quantitative determination of elements). Leningrad, Izd-vo Leningr. univ., 1964, 110-116

21

TOPIC TAGS: chromium concentration, chromium admixture, tin salt analysis, chromium determination, radiochromium, ion exchange resin, bromine water

ABSTRACT: A method for concentrating Cr in tin salts was developed to make the analysis of microgram amounts of Cr in metallic tin feasible. Cr-51 was added in amounts of 10-40 μg to tin salts and the radioactivity of the concentrates was measured. Satisfactory results were not obtained by hydrolyzing the Sn solution; by collecting Cr on SnO formed by addition of NaOH to $SnCl_2$; by sorption on ion exchange resin KU-2; or by vaporization of Sn as SnI_4. The concentration and total recovery of Cr was achieved by dissolving tin in hydrochloric acid and multiple oxidation with Br water, vaporization, and dissolution in HCl to remove volatile $SnCl_4$. The presence of H_2SO_4 hinders the removal of Sn. Orig. art. has:

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ACCESSION NR: AT5007825

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5 tables and 3 formulas.

ASSOCIATION: none

SUBMITTED: 28Sep64

ENCL: 00

SUB CODE: IC , 00

NO REF SOV: 006

OTHER: 000

ml

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